Clinical and Behavioral Characteristics of HIV-infected Young Adults in Care in the United States

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Persons diagnosed with HIV, engaged in medical care, prescribed ART, and virally suppressed among all HIV-infected, by age—United States, 2011*

Young adults have poorer outcomes at each step of the HIV treatment continuum

Lack of suppression leads to increased

- Morbidity
- Likelihood of HIV transmission when accompanied by transmission risk behaviors

Information on clinical characteristics, risk behaviors, and receipt of prevention services among young adults is needed to

- Inform interventions to improve health of HIV+ young adults
  - E.g., starting ART early for optimal health and decreased HIV transmission risk
- Monitor progress towards goals of improving health and increasing healthy behaviors among HIV+ young adults
Medical Monitoring Project (MMP) methods

- Ongoing HIV surveillance system
  - Collection of interview and medical record data from HIV-infected adults receiving care in 16 U.S. states and Puerto Rico

- Annual cross-sectional complex sample survey
  - Three-stage probability sampling to produce nationally representative data
    - States; HIV care-providing facilities; HIV-infected adults receiving care
  - Data were weighted to adjust for unequal selection probabilities and non-response

- Data collected June 2009 - May 2012
  - Participation rates
    - States 100%; facilities 76-83%, patients 49-51%
Analytic methods

- Describe characteristics that are useful for guiding prevention interventions and monitoring prevention progress among HIV-infected young adults in care
  - Young adult defined as ages 18-24
  - N=359, 3% (CI 2-3) of all adults in care

- Used Rao-Scott chi-square tests to compare 18-24 with 25+
  - Sociodemographics
  - Depression and substance use
  - Sexual behaviors, risk reduction counseling, and STI screening
  - HIV care and viral status

- Analyses accounted for clustering, unequal selection probabilities, and non-response
RESULTS
## Characteristics of HIV-infected young adults in care

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>Weighted %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>243</td>
<td>68</td>
</tr>
<tr>
<td>Female</td>
<td>108</td>
<td>28</td>
</tr>
<tr>
<td>Transgender</td>
<td>8</td>
<td>3*</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>203</td>
<td>58</td>
</tr>
<tr>
<td>Hispanic</td>
<td>78</td>
<td>19</td>
</tr>
<tr>
<td>White</td>
<td>63</td>
<td>18</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td><strong>Age at diagnosis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>34</td>
<td>9</td>
</tr>
<tr>
<td>1-12</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>13+</td>
<td>307</td>
<td>87</td>
</tr>
<tr>
<td><strong>HIV disease stage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS or nadir CD4+ 0-199</td>
<td>149</td>
<td>42</td>
</tr>
<tr>
<td>No AIDS and nadir CD4+ 200-499</td>
<td>174</td>
<td>47</td>
</tr>
<tr>
<td>No AIDS and nadir CD4+ &gt;500</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>359</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: MMP cycles 2009-2011; *Coefficient of variation is > 0.30, estimate may be unreliable.
Sociodemographic factors among HIV-infected adults in care by age group

All differences significant at $p < 0.05$

Source: MMP cycles 2009-2011; * Past 12 months; † No health insurance/coverage or only Ryan White coverage
Depression and substance use among HIV-infected adults in care by age group

Source: MMP cycles 2009-2011; * past 2 weeks, † past 30 days, ‡ past 12 months
Sexual behavior, risk reduction counseling, and STI screening among HIV-infected adults in care by age

All differences significant at $p < 0.01$

Sexually active: 86%
Sex without a condom: 62%
Sex without a condom with neg/unkwn partner: 39%
Risk reduction counseling by provider: 73%
Gonorrhea screening: 43%
Chlamydia screening: 42%
Syphilis screening: 43%

Source: MMP cycles 2009-2011; All variables measured in past 12 months * reported in interview, † documented in medical record, among sexually active
HIV care and viral status among HIV-infected adults in care by age group

Source: MMP cycles 2009-2011; all variables measured in past 12 months; * reported in interview; † documented in medical record; ‡ most recent viral load test undetectable or ≤200 copies/ml; § all viral loads over the past 12 months undetectable or ≤200 copies/ml
DISCUSSION & CONCLUSIONS
Discussion

- Although young adults more likely to receive provider-delivered risk reduction counseling and STI screening, also more likely to report sexual risk behaviors

  - Providers may be appropriately focusing efforts on young adults, although STI screening levels in particular are suboptimal

  - Community or social media-based interventions may complement clinic-based risk reduction efforts
Discussion

- Despite similar levels of care utilization, young adults had lower levels of ART prescription and use, adherence, and viral suppression
  - 66% young adults in care were not durably virally suppressed
  - Getting young adults engaged in care may not be enough to ensure they achieve optimal health
Limitations

- **Population limited to those in care**
  - A high proportion of HIV-infected young adults are either not diagnosed or diagnosed but not in care
    - However, analyses of the last steps in the care continuum needed to complement efforts to increase diagnosis and engagement

- **Confounders, mediators, and effect modifiers of the relationship between age and health outcomes not assessed**
  - More work on the reasons for suboptimal health among young adults is warranted to guide development of programs and interventions

- **Potentially important differences between perinatally and behaviorally infected young adults not assessed**
Conclusions

- While addressing each step of the care continuum is important, HIV-infected young adults may face greater barriers to achieving optimal health, even among those in care.

- Enhanced interventions to support ART use and adherence among young adults may be needed.
Acknowledgments

- MMP participants, facilities, project area staff, provider and community advisory board members

- Members of the Clinical Outcomes Team and Behavioral and Clinical Surveillance Branch at CDC
Thank you

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